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Possible Genetic Determinants of Chemical Carcinogenesis.

The objective of this project is to develop a model system in vitro for studying carcinomas. Possible interplay of endogenous viruses and chemicals in cocarcinogenesis will be investigated here.

An epithelial cell line has been derived from the liver of NZB mice. The characteristics of this line and its sensitivity to chemical transformation will be studied. The genetic basis for viral and chemical carcinogenesis will be studied by breeding experiments using NZB, 129/J, and SWR mice. NZB mice spontaneously produce significant titers of xenotropic virus. 129 and SWR produce very little. The possible interplay of X-tropic virus production and chemical induction of transformation will be examined by using F1, F2 and backcross generations.

(NZBx129)F₁ produce significant titers of infectious xenotropic virus whereas 129 mice alone do not. Testing of the NZBxSWR and the backcross generations for virus production is in progress. Concomitantly, these mice will be tested for susceptibility to tumor induction by 3-mercaptopropanoic acid.

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